



JACG JACG

NEWSLETTER
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THE JERSEY ATARI COMPUTER GROUP

★★★★★DISK LIBRARY LISTING - PART I★★★★★

From the Editor's Desk...

As announced in the twelve star banner, above, this issue contains the first half of the JACG Disk Library Listing. It is an incredible collection. You can surely find something in our library to satisfy anyone's wants. The categories include simulations; graphics; adventures; demonstrations; arcade games; mathematical, english, science, music, and geography educational programs; utilities; sound demos; BASIC demos; home and business application programs; plus special programs like the FORTH language and the SCRIPTOR word processor.

The listing takes up thirteen tightly packed pages. The second half of the list will be published in next month's newsletter. Disk Librarian Don Ursem and his crew have done a beautiful job putting this compendium together. Each program has a detailed description which can't help but taunt you to try it. We will be demonstrating some of these programs during coming meetings so you can see the quality and variety of material so readily, and inexpensively, available to you.

We make these disks available to everyone, not just JACG members. The disk library operates in the black thanks to the monumental efforts of people like Don Ursem, Richard Lamb, Dennis Hoskins, Charles Neppel, Harold Wolverton, and Manny Lieberman. If you know Atari users not in the JACG why not offer to share this list with them so they might order a disk or two. If you are a tape user many of these programs are available in cassette form. Read the How To Order material on page 18 to see the limitations. We are not out looking for business but isn't this a great way to show someone one of the advantages of belonging to a user's group? By the way, when are you making your next JACG disk purchase?

Frank Pazel
Editor-in-Chief, JACG Newsletter

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MARK YOUR CALENDARS!!

JACG Meeting Schedule

April 14, 1984
(May 12, 1984
May 26, 1984 <==Chris Crawford Day

Meetings -- Meetings

AND NOW A WORD FROM THE PRESIDENT....

I want to reiterate my message from our February meeting in this column. The membership of JACG is not your typical cross section of Americana. We are much more educated and motivated than that. We typically have more than 300 people interested enough to give up a Saturday morning to attend our meeting. Yet, when you look at those who contribute to the group (as opposed to those who take from the group), we are quite typical. That is to say, there are a handful who do it all. I think we can do better than that. I'd like each one of you to search your conscience and see if you can find two hours per year to give to the group. I'm asking you to contribute to our terrific newsletter or to making our fine meetings even better. "But", you say, "I don't do any programming!" Then contribute a review or a cartoon or a poem or a personal experience or viewpoint. "But", you say, "I'm not a writer!" Then contribute a presentation at a meeting. "But", you say, "I just can't get up in front of so many people!" Then contribute an idea for a meeting and work to bring it about. As with most endeavors, the more you put in, the more you get out. It's as simple as that.

I've been playing around for a couple of months with a new product called "PIGGYPROM" from Tel-Link of No. Brunswick (which is Nelson Penada of JACG). This board, which plugs into a memory board slot of the 800, has room for 7 2764 EPROM chips. They are arranged as two 16K blocks and 3 8K blocks, with each block selectable by switches that attach in the compartment where the BASIC cartridge goes. If you have the ability to move cartridge programs into memory and then write them onto EPROMs, you can easily switch between these programs by simply changing switch positions. An interesting product.

We have tentative plans to make May a really different meeting month. It looks like we will be holding two meetings - one on our regular second Saturday and an extra meeting on the fourth Saturday. Our regular meeting will probably be structured very differently than we are used to and if it is, it will provide an opportunity to group by special interest. Stay tuned for more details. The extra meeting will feature Chris Crawford of Atari, star of the Atari video tapes and programmer of Scram, Eastern Front, etc. From all reports, he is an exciting speaker. Note that both of these plans are tentative, but I wanted to give you advanced warning so that you could make plans to attend.

Richard Kushner - JACG President

by Richard Rospond - Program Chairman

Here is a quick look at what's on tap for the monthly meetings:

*** March - *** The main topic will be printer maintenance. This is a continuation of the lively discussion that we had at the January meeting. The discussion will be led by Chris Ahlers of Dependable Parts, an authorized Epson shop, as well as an ATARI service center. Also - a review of the ATR8000 and reports by the members who have purchased the system, and are running C/PM on their ATARI's

*** April - *** Don't miss this - Art Leyenberger has used his considerable influence to get several people from ELECTRONIC ARTS to show one of their games, and answer a few questions on Gameology. This company is one of the all time biggies, and I had to promise them an hour, but I am sure it will be worth it.

I thought the members might be interested in the Softsel HOT LIST of software best sellers (week of Dec. 1)

GAMES/ENTERTAINMENT

		weeks on chart .
1. Zork	Infocom	62
2. Zaxxon	Datasoft	37
3. Choplifter	Broderbund	63
4. Lode Runner	Broderbund	17
5. Frogger	Sierra-On-Line	62
6. Telengard	Avalon Hill	11
7. Jump Man	Epyx	34
8. Temple of Apshai	Epyx	62
9. Zork II	Infocom	60

All available for ATARI

Business

		weeks
1. Lotus 1-2-3	Lotus	43
2. PFS file	Software Pub.	64
3. Bank St Writer	Broderbund	47
4. Home Accountant	Continental	63
5. PFS Report	Software Pub.	64
6. Dollars & Sense	Monogram	11
7. dBase II	Ashton-Tate	62
8. WordStar	Micropro	63
9. Homeword	Sierra-on-Line	4
10. Visicalc	Visicorp	64

3, 4, 10 available for ATARI

Educational

Type		weeks
1. Master		
2. Scarborough	59	
3. Most Amazing Thing	Spinnaker	28
4. Facemaker	Spinnaker	57
5. Typing Tutor	Microsoft	49
6. Story Machine	Spinnaker	56
7. Alphabet Zoo	Spinnaker	1
8. Type Attack	Sirius	28
9. Spellicopter	Designware	2
10. Kindercomp	Spinnaker	27
11. PC Tutor	Comprehensive	36

All but 4 and 10 are available for ATARI.

I thought you might want to compare the best sellers versus your own library.

TIDBITS

News and Views By
Arthur Leyenberger
Editor-at-Large, JACG Newsletter

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Spring is in the air. I can feel it. The long awaited annual rebirth is about to happen. With the recent announcement of Atari's improved performance in the fourth quarter of 1983 it is evident that another rebirth is happening. That of course is the new improved, healthier Atari.

When I was in Las Vegas in January attending the analysts meeting held by Jim Morgan, I heard him say then following. Atari is turning the corner. We will be reporting much better performance for the 4th quarter 1983. To the optimist, these figures will indicate that Atari has already turned the corner. To the pessimist, it won't matter because they are down on Atari no matter what we do.

To the majority of analysts and industry soothsayers the figures will cause this reaction: 'I'm not sure Atari has turned the corner yet, but let's watch them for just one more quarter.

Something is happening'. Morgan's words were prophetic. One of my sources recently told me that between Christmas and January 31, 1984, Atari sold 150,000 800XL computers and still could not meet demand. Even Infoworld, although unwilling to say anything nice about Atari, thought it was a good bet to run a cover story recently titled "Will Atari Go Down the Tubes". You can be sure that those wimps at Infoworld would not even run a story like this unless they were (privately) optimistic and Atari's comeback will make them look good.

From the horses mouth department. The following is latest information from my official PR contacts at Atari. The following products are officially dead and there will be no funeral services: 1400XL and CP/M module. The 1450XLD is still in limbo and it may be a few months yet before its' fate is known. The expansion box will be out sometime during the second half of 1984. The new SYN software series should be shipping by the time you read this.

Atarilab is shipping. I have one and it is an interesting product. The 48k module for the 600XL will be out March 15. Here is a good one. The Translator disk (actually the 400/800 operating system) which is used to make the XL computers compatible with all software is available to 1200XL owners free of charge by writing to (with your 1200XL serial #): Atari Customer Service, 1312 Crossman Rd., P.O. Box 61657, Sunnyvale, CA 94088. To 600XL and 800XL owner's it will cost you \$9.95.

Why this weird policy? It seems that Antic Magazine published (incorrectly) that it was free to 1200 owners so Atari thought that they would honor it. You will soon be reading in my Outpost column in Creative Computing Magazine that Atari has announced a buy-one, get-one free offer. Buy an 800XL, send in your warranty card and Atari will send you another 800XL free. Do you think if I print this Atari will honor it?

Seriously folks, you ought to just buy the disk from the JACG library for \$5 (we have permission to distribute it). You get a two-sided disk containing two versions of the translator. The normal version and the industrial strength version. (See my Outposts Atari column in the March issue of Creative Computing Magazine for full details). Unfortunately, Atari has no plans to make a cassette version of the Translator. That is a crummy policy. Cassette owners ought to be able to get it as well.

Some last minute random data. The SYN series will all be compatible with each other and Atariwriter. Atari will start promoting its' entertainment software authors immediately. Warner Software is completely separate from Atarisoft. There is an XL supplement to the Technical Reference Notes called the XL Addendum (Part #C024515-001). Check here next month for details on how to obtain this valuable document. The 850 Interface is still a real product. The new version is electronically the same but now comes in a white box instead of a beige box. There will be additional programs for the Atari Touch Tablet in the categories of music and children's educational. Availability? Beats me! Finally, the extra ink cartridges for the 1027 Letter Quality Printer have been available for two months. If your local retailer does not have them (due to the distributor not having them) they can be ordered directly from Atari Customer Service (ACS) for \$4.95 a box. Details next month on what you get in the box, how much to add for postage and the address of ACS.

That's a wrap for this month. Stay tuned for the continuing adventures of Atari. Catch you next time.



Who Is This Varlet?

The scoundrel on the right, leaning shamelessly on King Arthur and garbed as Merlin, intends to visit his najick upon us May the 26th.

Read about this on Page 2.

Getting Down To BASICs by Richard Kushner-JACG

As advertised, this month we'll give a peek at a section of Basic Atari BASIC, co-authored by yours truly and due on the bookstands in April. I sort of randomly picked out a section from early in the book, and this section looks at using the INT statement to round off numbers. INT (for INTEger) is introduced earlier in the book as a BASIC statement which produces the largest integer less than the value of interest. Thus $\text{INT}(3.98765)=3$, $\text{INT}(4)=4$ and $\text{INT}(-9.8)=-10$. Without further ado, here is the section....

....Rounding Decimal Results

Another use for INT comes up when we work with dollars and cents where calculations come out in fractional cents. We would like always to round figures off to the nearest cent for printing. Anything that is .5 cents or more is "rounded up", and anything less than .5 cents is "rounded down".

We can convert dollars and cents to cents by multiplying by 100. Then if we add .5 cents, all values from .00 to .49 will become values in the range .50 to .99, while all values in the range from .50 to .99 will become values in the range 1.00 to 1.49. If we next apply INT, all decimal portions that were less than .5 disappear, and all values that were .5 or more result in one cent being added. Then we get from cents back to dollars and cents by dividing by 100. Thus, we can round values to the nearest cent with a statement such as

```
200 MONEY=INT(NUMBER*100+.5)/100
```

If we follow through what this formula does, we'll get an added feel for how it works. Let's assume $\text{NUMBER}=345.58679$, so that when we multiply by 100 we get 34558.679. Adding 0.5 gives 34559.179. When we take the INT of this value we get 34559; dividing by 100 gives 345.59, which leaves us with two decimal places as desired and correctly rounds off what we have eliminated. If we wanted to round off to three decimal places, we would carry out exactly the same procedure, only we would multiply by 1000 and later divide by 1000.

We can easily write a little test program to verify our solution for rounding values to the nearest cent (and incidentally for rounding any values to the nearest hundreth). See Program 4-3.

```
100 REM * DEMONSTRATE ROUNDING
140 PRINT "DATA","ROUNDED VALUE"
150 READ NUMBER
160 IF NUMBER=-9999 THEN END
200 NUMBER1=INT(NUMBER*100+.5)/100
210 PRINT NUMBER,NUMBER1
220 GOTO 150
```

```
900 DATA 3.09123,4.94561
910 DATA 2390,-1.5102
920 DATA .0009,-1.4861
990 DATA -9999
```

Program 4-3. Rounding to the nearest hundreth.

We have included the labeling of line 140 to give the display some meaning.

DATA	ROUNDED VALUE
3.09123	3.09
4.94561	4.95
2390	2390
-1.5102	-1.51
9E-04	0
-1.4861	-1.49

Figure 4-2. Execution of Program 4-3.

Note that this approach also handles negative values correctly. It is always a good ideal to verify that our program work properly for a wide variety of values. Even though the current problem doesn't require a particular class of values, it is desirable to test the program for them anyway. It is much easier to put the finishing touches on a routine while we are familiar with the problem than to return to it months later when we discover that we really do want to handle those previously unwanted values.

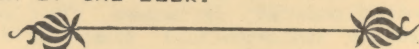
We can also use rounding to get around the problem seen earlier when some versions of Atari BASIC do not produce integer values in cases where we know they ought to. Exponentiation is the best known case. We know that 2^2 is $2 \times 2 = 4$ and that 2^3 is $2 \times 2 \times 2 = 8$. We also know that Atari BASIC may give us 3.99999996 or 8.000000001 instead. We avoid this problem by using rounding.

```
100 Y=INT(2^2+.5)
```

or

```
100 Y=INT(2^3+.5)
```

So, there it is. I'm very excited about this book and hope that you will give it a look when it comes out in April. Although this column has been a shameless plug for the book, I also intended it as a lesson in Atari BASIC, a language that is much maligned and misunderstood by those who haven't taken the time to use it. Next month we'll look at a more advanced section of the book.



This is your newsletter,

Please contribute to it!

Dump Koala Pictures To Printer

by John Callaghan - JACG

Thanks to Robert H. Watson of Brooklyn, NY you can store pictures that were created on Koala Pad's Micro Illustrator. To do so draw the picture, return to the menu, then with the stylus position the cursor on STORAGE (first replace the Koala disk with a formatted disk), and press the INSERT key on the Atari keyboard. The drawing will be automatically stored on the disk under the filename of "PICTURE". It can now be loaded to the computer using Micro-Painter.

I took the article from the February 1984 Antic further by changing its name from "PICTURE" to "DINO", using the menu options on Micro-Painter. The reason I did this is that I could now store more pictures on this file disk. This is done by pressing START after Micro-Painter is loaded, followed by "L" (for Load) when the option menu appears. Answer the prompt "LOAD FILENAME" with PICTURE and you'll get an error message of: END OF FILE. Hit RETURN and your picture will appear on the screen. Press OPTION key. When the menu appears type "R" (for Rename). The screen will ask: RENAME FILENAME. Type in PICTURE, (NEW NAME).

You can play with the new picture on Micro-Painter or continue on to print the picture. Materials needed to print the picture are: Epson MX with Grafrax, Color Print program, and a few colored ribbons if you want to print in color.

You can eliminate Micro-Painter from this process if you are only going to make a print of PICTURE. Just load it into Color Print instead of Micro-Painter.

To print a picture boot Color Print. At the first option select either a vertical or horizontal format. I chose vertical. Horizontal will print a larger picture. Replace the Color Print disk with your picture file disk. Type "L" to load the picture in. With the picture on the screen press START. Press "P" and select either LARGE or MEDIUM size print. I chose medium. Next, press "N" for normal or "E" for enhanced (darker) printing; then press "I", and finally press "B" (for Black and White).

Voila!!! Your picture comes to life like my Dino, below...



XIO 38, #6, 0, 0, SAVE\$

by Frank Pazel - JACG

Computing On TV - A Sort-of Review

The metropolitan New York area is flooded with educational television programs dealing with learning about the microcomputer. Most of the material is directed to the somewhat interested/barely beginner and often is overly simplistic. In defense, these shows do whet the appetite of the non-hacker and generally do little harm.

The three programs, all on PBS, I have watched are:

"Academy On Computers - Bits and Bytes"; Thursday, 8:30 p.m., Channel 13; repeated the following Thursday at 3:30 p.m.

Produced in Canada by the prolific Ontario TV group. Okay, if you can stand the puerile middle-aged learner (a GROWN man with a name like Billy?). Lots of computers and stuff, including Atari. Workbook available to use with the course (?) for \$12.95.

"Making the Most of the Micro"; Tuesday and Thursday, 3:30 p.m., Channels 50, 52, and 58; repeated at various times on Channel 25 (try Thursday at 4 p.m.)

Jolly good show, produced in England with help from Acorn Computers. Same group which last season gave us "The Computer Programme." Excellent presentations on a wide range of topics, done maturely, holds the interest of both neophytes and experts.

"The New Literacy" A friend taped this show for me on the spur of the moment (he thought I'd like it) but forgot (horrors) to record on which PBS channel or time. Really good show and I'd like to see a lot more of it. This might even be on the cable as CTN (the New Jersey Cable Television Network). Try 3 p.m. on Tuesdays.

We clearly need help. I can't verify times and channels since many stations seem to quickly do a musical chairs bit on scheduling. How about watching for these shows, recording name, channel, time(s), and your impressions? Send them to me and I'll print a compilation for others to share.

On a personal note and speaking of tv, if you have nothing better to do on Tuesday nights than to watch the tube your newsletter editor is scheduled to appear on ABC's "Foul-ups, Bleeps, and Bloopers" show sometime in March. I am also a magic freak and they are showing a clip of me sawing a man in half. As you might guess, things go rather badly but result, I think, in one of the best short segments they will ever show. As they say in shobiz- watch your local listings for Tuesdays at 8 p.m. (CLR)



Art's Arcade

By Arthur Leyenberger - JACG

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Axis Assassin

Electronic Arts is obviously on a roll. Such games as M.U.L.E., Archon and Pinball Construction Set, among others, have been heralded as a new generation of computer games. It is thought by many people that this company can do no wrong.

When I first loaded Axis Assassin I thought to myself that quality control must be slipping and that this was the first mediocre game to appear in their catalog. I am happy to say that my first impression was totally incorrect, totally.

True, Axis does resemble the arcade smash Tempest, but the similarity is only screen deep. Unlike the arcade version, Axis permits you to fire at enemies both away from you and towards you. Also, you can select from over 100 increasingly difficult battles. A demo mode in which you can play slowly against each type of alien without being killed is provided.

Some other shoot-'em-up games attempt to play down the true nature of the game. Your goal is simply to see how long you can last. Axis makes no pretensions. There are no rules, no strategies. Your only goal is to survive. Or die trying.

The game begins with Spinner Scouts building the webs on your screen. Hunters, Drones, Spores and Xterminators pursue you from out of nowhere, attempting to destroy your Axis Assassin. Unlimited firepower is at your command. A Pulse Bomb destroys all fighters on the grid, and if used expertly, lets you earn extra Assassins in the Nest. As you blast your way through the webs, the Master Arachnid will appear. When he does, racing towards him lets you escape to another, more challenging grid.

Several game features improve the playability of the game. The sound can be turned off for those late night sessions, fame will be yours with the high score screen and the game can be paused for a quick sandwich. The pace is hectic so the latter is much appreciated.

Axis Assassin, written by John Field, is a game that has depth and is very addicting. What more can you ask from a computer game.

Tennis

If you read the previous game review, you might get the mistaken impression that I think VCS graphics are bad. That is not necessarily true. In fact, one of my all time favorite games is a VCS game called Tennis by Activision. The graphics are nothing to speak of because there really are not any. But the

game play is challenging and enjoyable and has for years had me longing for a tennis game for the Atari computer.

Now my wait is over. Tennis by Atari is out in cartridge format and I can play singles or doubles any time I want without having to get all sweaty. The first thing you see when the cartridge loads into memory is a large tennis trophy with Atari's name on it. Given the berating that Atari has been getting lately, I guess they decided to give themselves an award. That's okay with me. It looks nice enough.

Next, you can enter your name on the scoreboard which is a nice touch. The line graphics will not win any awards for complexity but with the black background, the playing court is quite attractive. Two levels of difficulty may be chosen and there are three game variations. Singles against the computer, singles with two human opponents and doubles with each team made up of one player and one computer partner.

During the game, the score is displayed at the top right of the screen and the number of games won is displayed at the top left. A match consists of two sets. Given the constraints of the format, the manual does a good job of explaining the game of tennis. Some advice on tennis strategy is also given that, although simple in nature, would be good enough for a beginner to use in a real game.

The only criticism I have about Atari Tennis relates to how you control your shots and players position via the joystick. The players position is controlled by moving the joystick in the desired direction. There is no need to swing the racket, just be close enough to the ball. Pressing the button while the joystick is in the center position causes you to hit a lob to the center of the opponents court. If the other player gets to the ball before it bounces, he will return it with an overhand shot.

By holding the button down and "pointing" with the stick, you can control where your return shot will go. If no direction is indicated, the computer automatically returns the ball to the center of your opponents court. The difficulty is that you cannot move your player while holding down the button, so you must get to the ball first, then indicate where you want it to go, if there is enough time. This technique requires practice and a reliable and comfortable joystick.

I find that the doubles game with two human opponents is the most fun. Once the technique of player movement and ball positioning is mastered, Atari Tennis will provide you with hours of good fun, when your real tennis game has been rained out.

Flip and Flop

When Fernando Herrera wrote Astro Chase over a year ago the game was given high marks for playability and graphics. The

company, First Star Software, was named for the fact that Fernando was the first to receive the \$25000 Atari First Star Award for his user written program called My First Alphabet. Some folks scoffed at the idea that a company based primarily on one individual could succeed in the home computer game business.

I am pleased to report that First Star Software's newest game, Flip and Flop is great and will help ensure the success of the company. Written by Jim Nangano, Flip and Flop will no doubt remind you of Q-Bert type games, especially Ironix's Juice. Fortunately, this game is not just another clone but a novel addition to the genre.

The playfield is made up of a maze of squares and platforms that represents the zoo of the future. Two characters, Flip the kangaroo and Mitch the monkey, want to escape and it is up to you to help them get back to the circus from which they were taken.

The goal of the game is to play both characters through as many levels as possible. Flip must land on all of the squares to complete a level and the zoo keeper is constantly in hot pursuit. On every other screen, Mitch hangs upside down from the bottom of the maze, and must swing from tile to tile while the zoo keepers net is after him.

If you help Flip and Mitch make it through all 36 levels, the two heros will be allowed to rejoin the circus. After every 5 completed levels there is an animated intermission. These are amusing and give you a short breather between rounds. "Entry of the Gladiators", a familiar circus tune, is heard throughout the game.

Flip and Flop is an excellent game. The graphics are stunning and the game is fun for all ages. I highly recommend it.

Millionaire

When I was growing up there used to be a program on television called the Millionaire. Each week this guy named Michael Anthony would give some unsuspecting person a million dollars. It seems that our friend Mike worked for an eccentric multi-millionaire who got his kicks by giving people money and observing their reaction.

I have always wondered what it would be like to get a million dollars. I suspect that the closest you and I will ever come to that is to play the game called Millionaire from Blue Chip Software. In fact, playing this game which is really more like a simulation than a game, might let us learn enough about the stock market to become millionaires, or at least to make a few bucks.

Millionaire realistically simulates the activity of the stock market. It is based upon actual stock market trends rather than random numbers. The object of the game is to become a millionaire by playing the stock market and following the advice of that wise

old sage, buy low and sell high.

To begin a new game requires a wait of about 15 minutes while the program creates a new 91 week stock market environment for you. (You begin the simulation with \$10000 and at this entry level are considered only to be a novice who is allowed to make cash transactions). That seems fair since you are not yet a big investor with a proven track record.

You begin in the 14th week of the 91 week stock market history. Historical stock prices for 15 different companies and the industry averages for five different types of businesses: computer, oil and gas, retail, auto and heavy industry are available. You can also see the news for the week and the weeks high, low, close and change for any of the stocks in the market.

Each week, buy and sell decisions are made based upon a variety of information. Like the real stock market analysts on Wall Street, you can examine corporate histories and view stock market graphs showing overall market trends, industry groups, stock price tables or individual stocks. There is even a news journal with company announcements that may or may not affect the business environment.

If you become worth \$12000 you are no longer considered a novice. Your status rises to that of an investor and you are allowed to purchase stocks on a margin account. This means that you can borrow a percentage of the purchase price of your stock transaction. At \$18000 you have attained the rank of a speculator and can use call options. They offer the greatest potential for profit and loss. The buyer assumes a significant rise in stock price and promises to buy at a slightly higher price at a later time.

The professional level requires assets of \$40000. It will allow you to put options. These are used when you predict a significant drop in the value of a stock and allow you to sell at a slightly lower price. You will reach the status of broker when you acquire \$100000. Then you will be able to take out loans up to 80 percent of the value of the stock. Just remember your status can progressively increase or it can plummet instantly. If your net worth goes below zero at any time you are considered bankrupt and the game is over.

At week number 91 your assets are converted to cash and a new game may be started at your then current status. A complete game takes a couple of hours and can only be played by one person at a time. However, the status of up to 14 players may be retained on the disk and games may be stopped and picked up at a later time.

Millionaire by Blue Chip Software is an enjoyable and educational game. Stock market investors at all levels will enjoy this very accurate simulation. The manual is brief but descriptive and the game is packaged in a luxuriously padded plastic folder.

R.A.N.D.O.M. N.U.M.B.E.R.S

by
Hank Hirschfeld - JACG
2011767-1344

1050 REMOTE DRIVE SELECT MOD.

Now let's continue on how to modify the 1050 drive so as to be able to change the drive number with a remote switch. Last month we were able to do the modification on the 810 drive with no soldering. This time we will have to make two easy solder connections. Remember when you open your drive you may void your warranty so you may want to wait until your warranty period is finished! The soldering is just "tacking" two wires to two connections so that the unit can be unmodified to look like new.

1. First we will have to open the unit up, disconnect all wires and turn the 1050 over. Six screws have to be removed, four in the four deepset holes and two are at the front attached to the dark brown front bezel. Now holding the case together turn the drive over into the normal position, the four screw will fall out so put them aside for later. Now gently swing the bottom part of the bezel out and you should be able to remove it without damaging the silver label on top. Gently lift off top cover and you will see the Tandon drive assembly on top of the printed circuit board.

2. Our mission is to get at the bottom of the printed circuit board. The drive assy. is not secured it just sits on four metal pins. The circuit board is held down by a small plastic finger on each side about 2 inches from the front. Try to spread both fingers out and lift the board and drive assy. out of the bottom case.

3. Turn the board and drive assy. over so that you can view the bottom of the circuit board. Orientate the board so that the front of the drive is facing you. The left-rear corner should be where the drive select switches come through the board. Each switch is comprised of three connections going from left to right.

4. We are only concerned with the rear most switch connections. Now "tack" solder a wire to the two outside connections of the three going across. In other words if the three contacts going from left to right are 1,2,3 connect a wire to 1 and another wire to 3 leave the middle connection alone. Feed the two wires out the hole used for setting the drive select switches.

5. Gently reverse the procedure and put the drive back together. Set the drive select switches for Drive 1 operation.

6. Now as long as the two wires are left open the drive is in Drive 1 mode, when they are connected together the drive becomes Drive 2.

7. If these wires are connected to a double pole double throw switch so that one pair from one drive is open while the other is connected the open one will be drive #1 and the connected one will be drive #2. If we throw the switch so as to reverse the open/connected situation we will now make what was drive #1 will become #2 and what was #2 will become #1

I am using this with one 810 and one 1050 and really find it very handy.

PERFECTING DATA PERFECT

One of the things some of us lazy folks may do when first using DATA PERFECT is not making the back-up as described in the instructions. This is not just a standard copy of our source, but a specially formatted copy the speeds up the sort routine. Here is how to make your back-up disk if you did not make one.

Load DATA PERFECT and then load your data base that you wish to make a back-up disk for. Go to the utilities menu and call up "REFORMAT DATA BASE". What we will do is reformat with no changes which will generate a new source and a back-up disks. Have two blank disks ready for later when you are requested to insert them for the copies. As each screen comes up hit the [Q]uit command or RETURN until you get to the final screen which asks for a [Y]es or [N]o verify for disk insertion and proceed. You will wind up with two disks one containing the source and the other your back-up. Remember that the second disk in a single drive system will be your back-up. You can use the first one as a copy of your source disk.

Original Adventure

\$15⁰⁰



***** Atari 400 or 800 *****

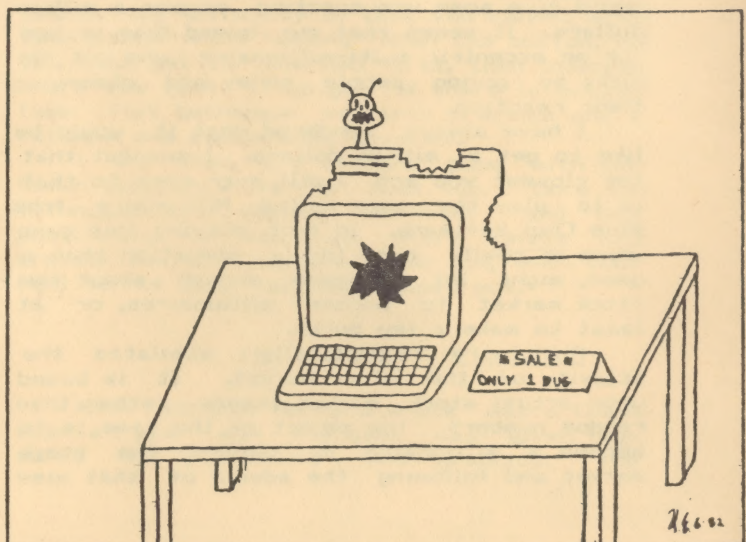
NOW, for your Atari, the Colossal Cave Adventure, faithfully reproduced from the original large computer version. Search for treasures while you unravel the mysteries of the cave. The entire evil cast of this classic original, from deadly dragon to nasty dwarves to tenacious troll will attempt to stop your quest. Two mazes, 130 rooms, the pirate and much much more await the brave who dare enter the cave. Even magic is rumored to work therein! This is the classic original that started the whole adventure craze! A must for every Atari owner. Comes complete with 86 hints and a SAVE/RESUME feature.

(Atari BASIC cartridge required.)

Specify 32K tape or 40K disk

Please send \$15.00 to:

Bob Howell
20 Richman Rd.
Hudson, NH 03051



From LA Atari Computer Enthusiasts Newsletter

The Report Card
by Frank Pazel - JACG

Kids On Keys is one of the latest releases from Spinnaker in a series of graphically bright programs for the very young. It is for the peanut butter and jelly set what Typo Attack and MasterType is for the older crowd, plus more. The premise is simple and solid. It teaches kids the locations of the letter and number keys by playing a series of games with them. It is not rote learning and it is not overwhelming, two factors essential to making quality learning software.

The opening screens are colorful with carnival-like sounds. A balloon with a waving child slowly descends and rises and a train choo-choos around as the user is welcomed to the program. The main menu requires selection of three games, each with four levels of play. The simplest of the games is a shoot apart the very slowly falling letter or number by pressing the correct key. As each character is correctly obliterated it is added to the scoreline on the top of the screen. After fifteen tries the locomotive pushes all the winners off screen, a score is posted, and another round is made available. Increasing the level of play brings faster movement to the letters.

The second game delivers five pictures of various objects in solid colors. Depending upon level chosen the player must type in only the correct first letter (c for cat) or the entire word to get points. The pictures are then shown again in a bonus round, but this time in a different order, a different color, and with about fifty percent of it randomly removed. Changing levels decreases the time allowed for identifying pictures.

Game three puts five pictures on the screen at once, each with a number underneath. The name of a picture appears and gradually begins to fade away. Typing in the correct number to match the word brings rewards in the form of sounds and score. Bonus rounds bring back partially formed pictures in different colors and positions. Again, choosing different levels brings faster versions including objects which fall and must be identified in part or in whole. Level four of this game is very fast and should prove to be the final exam for any youngster showing his stuff.

Written in valFORTH the game runs at fast enough a speed for this application. Spinnaker is, thank heavens, getting away from long and tedious screen wipes and show-off graphics as typified by Face Maker. The characters are in large graphics 2 mode and are very easy to read. In some levels the player may want to correct a typing error but that is not possible until a word the length of the required string has been typed in and the RETURN key has been pressed. Some would say this encourages careful typing but I personally would have preferred immediate correction with the B/S key. The disk comes with ten pictures on it (there may be more but I didn't find them) and the user can soon identify most of the shapes rather quickly. This doesn't take away from the program since the levels provide the real challenge. There is an option to generate your own pictures using a joystick but these must be done in sets of ten. Depending on your time and creativity this could be a terrific option.

Kids On Keys is highly recommended for the right crowd. Spinnaker says it is for ages 3-9 and I can't disagree. The concepts are few and strong. Much learningware today suffers from the lack of those attributes. I've tested it on first and second graders and they loved it. Whether you want your kids to learn the keyboard by hunting and pecking is a personal decision. When frustration sets in the kids often just begin pushing one key after another until they hit the jackpot. Monitoring will prevent that. In a time when typing and computing skills are becoming a near necessity it probably isn't too soon for little ones to at least begin to feel their way around Qwertyville. My gradebook shows an A- for Kids On Keys. It is available from Spinnaker Software Corporation, 215 First Street, Cambridge, MA 02142 for \$49.95.

Write The Punch Line Contest

Which of the following funny lines best suits the Ben Woodenteeth cartoon below?

1. "It seems to fly alright but I think I like the name 'Franklin Ace' better"
2. "I knew I should have listened to Frank Pazel and installed one of those surge protectors."
3. "This thing is just too unstable. Like I told my wife; I need more tail."
4. None of the above. Write your punch line for this JACG/Tony Pellechio cartoon and be a candidate for a free disk library choice. Submit your ho-ho to JACG Newsletter Editor, 14 Whitman Drive, Denville, NJ 07834 no later than March 25th. Show the world you are the cleverest pundit around. Winners (2) funny line(s) will be published in next month's newsletter. All submissions become the property of JACG and we reserve the right to throw them away.



Original Art Work by Anthony Pellechio - JACG

ATARI FORTH FOR TEN DOLLARS

by Donald Forbes - JACG

Every bite into those billions of McDonald's hamburgers you bought put millions in the pocket of the late Ray Kroc. He had a simple philosophy.

```
+++++
Nothing in the world
can take the place of persistence.
Talent will not;
nothing is more common than
unsuccessful men with talent.
Genius will not;
unrewarded genius
is almost a proverb.
Education will not;
the world is full
of educated derelicts.
Persistence and determination
alone are omnipotent.
+++++
```

Most Forth nuts live by the same philosophy, for two simple reasons: (1) they are individualists living on limited budgets and (2) Forth is probably the least supported of all the world-wide computer languages.

A glance at any recent issue of BYTE or Dr. Dobbs's Journal or Forth Dimensions shows that Forth comes in two flavors: fully supported professional development systems costing hundreds of dollars, and low-priced versions (with minimal support) for the hobbyist.

Charles H. Moore invented Forth, but he never placed it in the public domain. Most hobbyists use the version distributed by the Forth Interest Group in San Carlos, California. As William F. Ragsdale pointed out in November 1980: "The fig-Forth implementation project occurred because a key group of Forth fanciers wished to make this valuable tool available on a personal computing level. In June of 1978, we gathered a team of nine systems level programmers, each with a particular target computer. The charter of the group was to translate a common model of Forth into assembly language listings for each computer. It was agreed that the group's work would be distributed in the public domain by FIG."

The outcome was the fig-Forth Installation Manual with a complete description of a Forth model (assembler code and all) for a 6502 computer--the same chip that drives the Atari. The model consists of 34 bytes of boot-up parameters. This is followed by about 800 bytes of machine executable code in the form of Forth word definitions. Its purpose is to convert your computer into a standard Forth stack computer. All execution ultimately refers to these machine code definitions.

Next come the constants and variables that allow you to control the "Forth stack computer." They comprise the bulk of the system, allowing you to execute and compile from the terminal. There are only four pieces of installation dependent code: KEY (accept a keystroke), EMIT (display a keystroke), ?TERMINAL (test for the break

key), and CR (execute carriage return and line feed). The rest of the model is almost all written in Forth. (Will be glad to give you a copy of the 60-page installation manual.)

At first the Ragsdale fig-Forth model was all that was available in the public domain. Then after rumors that it was going to be withdrawn Glen B. Haydon modified the source code to implement the 1979 Forth standard and produce the MVP-Forth marketed by Mountain View Press.

I shall always remember the day of the 1984 Superbowl. That was the day I discovered the two Atari JACG Forth disks were word-for-word implementations of the Ragsdale model. There is no better illustration anywhere of the internal workings of Forth on a real computer. I had owned them for almost a year and only now discovered their true worth. I rushed to make backup copies and store them away safely.

The Atari Forth disks by Steve Calfee and others held another unexpected and welcome surprise--a decompiler which not only decompiled the Forth code, but the assembler code as well, an enormous help to understanding of the "Forth stack computer."

Last but not least the Calfee disks have a whole set of screens devoted to Atari graphics including player-missile graphics.

The main reason it took me so long to realize the worth of the JACG disks was that I became engrossed in my \$200 ValForth package (an offshoot of the Ragsdale model) with its superb turtle graphics. Furthermore, the JACG disks (numbers 19 and 20 in the library at \$5 apiece) seemed hard to read, until I found an easy way.

The disks are easy to read if you do two things. First, change the screen color to a soft green with the following code--
DECIMAL : GREENSCREEN 204 709 C! 196 710 C!
196 712 C! ; --which does a poke to three color registers. Second, write a do-loop to list all the screens in order--
DECIMAL :
SCRLIST 60 1 DO I LIST LOOP ; --which you can pause by hitting <ctl> and the 1 key. The compiled code is on the first 20 screens which you can read by the command 0 PHYSOFF and then reset with 15 PHYSOFF (which is short for physical offset).

Mastery of Calfee's disks will furnish answers to most of the questions on the ValForth package. But more importantly, one will be well on the way to mastering the 1983 standard public-domain Forth that is now available. I have it up on the \$11,000 IBM PC at the office (you are welcome to a copy). Dollar sales of desktop computers in 1984 will exceed those of mainframes for the first time.

This latest Forth was created by two luminaries, Henry Laxen and Mike Perry, operating from a post office box as "No Visible Support Software" and "is available as is, with no support, handholding, questions, warranties, guarantees, assurances, refunds or any recourse whatsoever for \$25.00. Best of luck to you, and may the Forth be with you." Ray Kroc would have understood.

A Little Bit About Printers

by Richard Rospond - JACG

For those of you who attended our January meetings you might remember that we had a lively discussion about printers. An interesting comment was made about the actual speed of dot matrix printers - that is the useful speed is far below the quoted 100, 120 or 160 CPS.

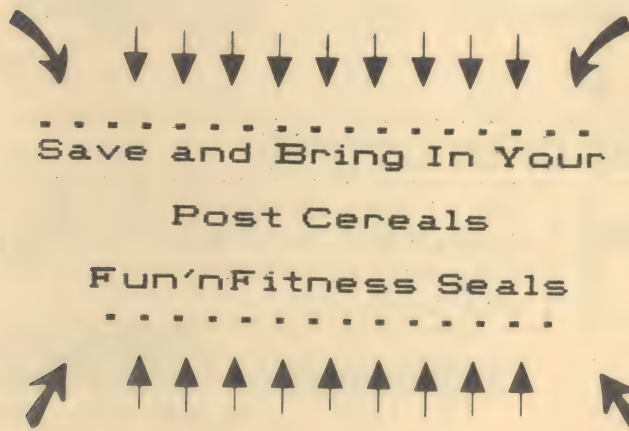
So I did a little digging into several old and recent magazines where benchmark tests had been conducted, and compared their claims on my Epson FX100 (at work), and my CITOH Prowriter (at home). Usually the manufacturers claim a speed in the PICA font, but this is for the same character repeated on the same line. Changing lines, characters or fonts decreases the actual speed.

	Epson	CITOH
Rated CPS	160	120
Dots (vert/horz)	40x240	160x144
# pins in head	9	9
buffer size	80 char	2K

Using printed pages of approximately 2000 characters, I came up with an approximate speed of 68 CPS for Epson and 60 CPS for the Prowriter. The Epson has a double strike mode where a line is printed in one direction, the carriage drops very slightly and prints the same line closing the spaces between the dots. This brings the Epson to a speed of about 36 CPS. The double strike Enhanced mode is even slower.

It appears to me that the best quality print that a DOT matrix has to offer is roughly twice the speed of a letter quality (daisy wheel) printer. I leave it to you to decide if this is a large or small difference, but it did find it very interesting, destroying the lightning speed I thought I was getting.

From what I have read, the slowest printer on the market is the ATARI 1027 at about 8 CPS. It claims to be letter quality at a much lower price than other letter quality printers. Be very careful when comparing the quality of LETTER quality or dot matrix printers, the features, prices, and speeds vary greatly, and a little research goes a long way.



You'll Never Be Sorry, That You Did Buy ATARI...

by Victor Hwang - JACG

The Russians may have their Mach 9 plane,
Which stops upon good Ike's bust. (the dime)
Which may be left out in the rain,
With wings that do not rust.

The Russians may have their speedy ships,
Which out-pull fifty whales,
And cruise at ninety knots on trips,
When they but use their sails.

And the Russians may have their radar net,
Which spots all germ-sized quarries.
But fellow countrymen, I do not fret,
For we have our ATARIs.

So those Russians may continue to strive,
To orbit an elephant crew (better than a monkey),
But I'll just pop one (elephant) in my drive,
And boot up "Lunar 1.2!"



TRADING POST

Trading Post is a service for JACG members who wish to sell or swap items of any type. There is no charge for this service and material must reach the Editor by the 20th of the month to be considered for inclusion in the following month's Trading Post. No commercial services or items will be accepted.

>>>>>><<<<<<<

FOR SALE: Atari 850 Interface Module - Fully operational. Only \$140. Contact David Siconolfi (201)582-7493 days; 761-1317 evenings.

FOR SALE: Centronics 737-3 Printer. Identical to the Atari 825 with exactly the same control codes. Uses pin feed, single sheets, or rolled paper (1 roll provided). Forward AND reverse paper feed in full and half-line increments. Cable included for connection to an Atari 850. Only \$200. Contact David Siconolfi (201)582-7493 days; 761-1317 evenings.

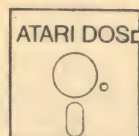
CP/M ON THE ATARI!

HOW? WITH THE INCREDIBLE

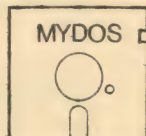
ATR8000

The ATR8000 is a 4 MHz, Z80, 64k RAM, CP/M microcomputer that is also the complete ATARI interface. Besides bringing CP/M to the ATARI home computer, the ATR8000 also enhances the ATARI's operation. The ATR8000 has ports for running a serial or parallel printer for ATARI DOS, complete with a built-in 48k buffer. And, the ATR8000 enables the use of standard 5¼" and 8" drives for ATARI DOS!

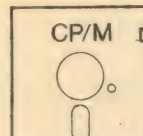
The ATR8000-ATARI system runs these DOSes:



This is the operating system of ATARI computers. The ATR8000 runs this DOS from any standard disk drive or from an ATARI 810 disk drive.

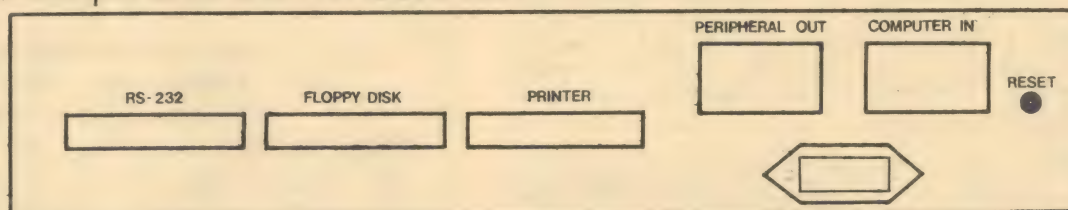


This multi-density DOS is an ATARI compatible DOS. In single density, it runs on an ATARI 810 or a standard drive. In double density, MYDOS runs on standard drives, single and double-sided, 5¼" and 8"!



This popular operating system comes with the ATR8000. It is a double density DOS that runs on standard drives. The ATR8000 reads CP/M disks from many other microcomputers, too!

What do the ports of the ATR8000 do?



Runs a serial printer or a modem in ATARI DOS and CP/M operation. Includes an automatic 48k printer buffer in ATARI operation. Software includes modem programs.

Runs both 5¼" and 8" standard disk drives. Runs up to four drives that are any mixture of size, density (single, double or quad) and type (single-sided or double-sided).

This standard parallel port runs a parallel printer in ATARI and CP/M operation. Includes an automatic 48k printer buffer in ATARI operation.

Interfaces ATARI peripherals to the ATR8000 for use in ATARI operation. Peripherals, like an ATARI 810 drive, are connected with an ATARI Daisy Chain Cable.

The ATARI home computer is connected to the ATR8000 here. For CP/M operation, it is also possible to connect an RS-232 terminal here.

Trademarks: ATARI, ATARI DOS, ATARI 810, ATARI, INC. ATR8000, SWP, Inc. CP/M, Digital Research, Inc. Z80, Zilog.

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CONNECTION

I am between.... That is to say, I sold my 850 interface, but can't get my Hayes smartmodem to run with the ATR8000 yet (waiting for MYDOS 3.16). So I borrowed the MPP-1000C modem from Round Valley Computer Center (Lebanon, NJ). I'll give you the bottom line first.... I'm impressed.

The MPP-1000C comes with all the parts needed to get going: the modem, a cable to hook up the phone line, a power supply, a connector to joystick port #2 and a smart terminal program on a cartridge. Hooking it up is simplicity itself, you don't even have to have a separate phone line; it goes between the phone and the phone line. It is a 300 baud modem (actually 100-450 baud) and does pulse dialing only. It supports the following switchable functions: full/half duplex, ASCII/ATASCII, X-MODEM/No X-MODEM protocol, No/Odd/Even Parity and 38/40/80 (with Bit-3 Board) columns. You can create up to nine buffers for saving downloaded programs or text (or for uploading them). The use of buffers saves time (and usually money) by allowing you to save to disk or tape or printer after you hang up the phone. You also can save directly to disk, tape or printer, if you choose.

The MPP-1000C also has a nice dial/answer function. In addition to supporting autoanswer, it has the capability of creating a phone number index which can be saved to disk or tape for later use. This permits you to dial frequently used bulletin boards by merely selecting from your own menu of numbers.

I've tried this modem out for a couple of weeks and it works just fine. However, like any new piece of hardware/software, you need to carefully follow its command structure. My recommendation is to practice on a nearby BBS or with a neighbor until you are comfortable with the commands. This will save you lots of money on phone bills. In particular practice downloading files and capturing text.

At about \$150, the MPP-1000C is an excellent buy. Not only does it work and have what appears to be a very nice piece of terminal software, it does not require an 850 interface. So it makes sense to get a joystick port parallel interface for your printer and the MPP-1000C as your modem (avoiding the need for an 850 interface altogether). Then you can call 201-549-7591 and enjoy the 24 hour Jersey Atari Computer Group BBS.

This is your newsletter,

Please contribute to it !

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for your ATARI. Asterisks indicate advertisements elsewhere in this newsletter.

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Welcome to this month's Technical Corner. In this issue I plan to discuss the timing of events within programs. This you may say is rather straight forward: "Just throw a FOR...NEXT LOOP in there...that'll slow her down a bit.". I have seen many programmers shriek in horror after they compile their BASIC programs only to find that what once was a 5 second delay is now no more than a momentary pause. The answer to this problem is to make use of the built-in clock in the ATARI.

The ATARI personal computers have three locations which are used for the internal clock. Each location represents a unit of time. This is quite similar to the hours, minutes and seconds we are all used to in our day to day lives. One difference is that the shortest unit of time in the ATARI is 1/60 of a second. The next unit of time in the computer is 256/60 seconds. The last unit is 65536/60 seconds. Are you confused? Don't be. It is all pretty simple once you get the hang of it.

Well, these 3 locations are 20, 19, and 18 respectively. (20 gets updated every 1/60 seconds, 19 every 256/60 seconds and 18 every 65536/60 seconds). These locations are updated consistently. They are the answer to our problem. Let's take a look at a simple example of timing in a BASIC program.

OBJECT: Effect a delay of 5 seconds.

```
10 REM RESET COUNTERS
20 POKE 18,0:POKE 19,0:POKE 20,0
30 REM WAIT 5 SECONDS
40 SECONDS=INT(((PEEK(20)*256*256)+
(PEEK(19)*256)+PEEK(20))/60)
50 IF SECONDS<5 THEN 40
60 END
```

The method described above can be used for timing as much time as you wish. Well, that's it for this month. Remember, any questions or suggestions for future articles should be forwarded to:

Ernest H. Rice III  
EHR3, Inc.  
174 Summit Ave.  
Summit, N.J. 07901  
(201) 277-6785

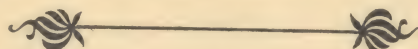
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10¢ 1st 2 mins  
3¢ minutes after (+tax) Page 15

\*\*\*\*\*

Articles should be submitted to the Editor by the 20th of the month for inclusion in the next issue. Submissions preferred on disk, using LJK Letter Perfect or Atari Writer. Font style should be Elite or Proportional with right hand justification. If hard copy is submitted the final printed width should be 4-1/4 inches from left margin to right margin. All formats will be considered including hand written documents if first arranged with the editor.

We want to encourage everyone to voice his/her thoughts, knowledge, and opinions. Writing will be modified at the discretion of the Editor. No piece will be knowingly altered out of original intent.



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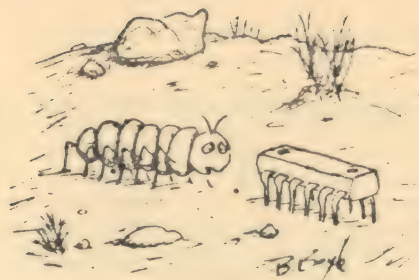
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The Jersey Atari Computer Group (JACG) invites you to become a member. Dues are \$20.00 per year and entitle the member to 1) Receive the monthly newsletter; 2) Purchase programs from the group's extensive tape and disk librarys at special rates; 3) Join special interest groups or form new ones; 4) Benefit from the expertise and experience of other Atari computer users; 5) Participate in group purchases of software at substantially reduced prices; 6) Receive a membership card that entitles the member to discounts at local computer stores; 7) Attend monthly meetings to learn about the latest hardware and software, rumors, and techniques for getting the most out of your Atari computer; 8) Submit articles and programs to the newsletter and give demos and presentations at the monthly meetings; 9) Participate in sale/swap activities with other members; and 10) Have a lot of fun.

If all of this sounds good then send a check or money order, payable to JACG, to:

Rick Olson  
5 Starling Drive  
Randolph, NJ 07869

Remember, receiving the JACG Newsletter is just one of the many benefits of being a member of JACG.



### FLEA MARKET RULES

In order to clarify the intention of the Executive Committee in sanctioning the use of the BTL lobby before and after monthly meetings for use as a member flea market we publish the following rules:

1. All flea market sellers must be current JACG members.
2. Space is provided on a first-come, first-served basis.
3. Only ORIGINAL programs with ORIGINAL documentation may be sold in the area of software.
4. Hardware of any type may be sold normally without constraint. The Executive Committee reserves the right, however, to limit the physical size and space consumed by such hardware.
5. Flea market business will be conducted only in the lobby and ONLY when the meeting is not in session in the auditorium.
6. The Executive Committee reserves the right to deny or suspend the privilege of flea market usage to any person, member or not, for infraction of these operating rules.



## TALKING BACK AND FORTH TO THE DISK

by Donald Forbes - JACG (377-1208)

If you pull up a chair and load your JACG Forth disk number 19 I will show you how you can talk back and forth to the disk.

Five features characterize Forth. One is virtual storage, where the disk acts as an extension of memory. The other four comprise the dictionary (plus editor), the two stacks (data and program), the two interpreters (text and address), and the assembler.

Forth consists of three parts. There is a virtual Forth stack machine (which needs the assembler). There is the operating system (which needs the stacks, interpreters, and virtual storage). Finally, there is the Forth language itself (which needs the dictionary and editor).

There is a prevalent misconception that Forth is complicated. The truth is that Forth follows the KISS principle ("keep it simple, stupid") whereas computers and their applications are complicated.

Virtual storage in Forth makes it so easy to move programs back and forth from disk to memory that you don't stop to ask how it is done. It is only when you want to move nonprogram data that you start asking about the mechanics.

Let us start by changing the color of the screen. Here is the code-- DECIMAL : GREENS 204 709 C! 196 710 C! 196 712 C! ; --for a green screen with a green border.

Now for a working disk. I use an old one that would not format properly. It gives me about 70 screens although some of them are unreadable, but Forth doesn't care and neither do I--why waste a good disk? If we do-- 3 LIST --we get a screen full of hearts. We will put the GREENS program inside it.

We will need a scratch pad, which in Forth is called PAD. With a-- DECOMP PAD --we see that it has 68 bytes, located above HERE. With a-- PAD ? --we get the location. If we do-- HERE PAD - . --we get the difference in the addresses, which is 68 bytes. If there is garbage in PAD we can tell with-- CR PAD 68 TYPE --and get rid of it with-- CR PAD 68 BLANKS. Now-- CR PAD 68 TYPE --will show a clean pad.

Let us put something in the pad. This takes-- CR PAD 68 EXPECT <ret> --and now we can enter a couple of lines of data, such as our GREENS program. Look at PAD and there it is.

How do we get this program, which is now sitting in memory, out to the disk? We move it into one of several BUFFERS residing in memory and from there move the program to our selected screen on disk. CR PAD 3 BLOCK 64 CMOVE will place the two lines at the beginning of screen 3. We can place them at lines 3 and 4 with-- CR PAD 3 BLOCK 64 + 64 CMOVE --because the 64 + adds twice 32 or the length of two lines to the starting point.

Now we have the data in the buffer. How do we get it to the disk? First we must mark the 1024k buffer as updated so that Forth will move it to the disk. That takes-- UPDATE. Then we use the command-- FLUSH --which tells Forth to move all updated

buffers to disk. If we turn up the sound we can hear our program being written to the disk. The important point to note here is that the BLOCK numbers correspond to the screen numbers in the JACG disks (this is not true for the ValForth package).

If we do-- 3 LIST --we see our program sitting on screen 3 amidst a sea of hearts. Success! The loader apparently does not care one way or another about the hearts so all we need is-- 3 LOAD. We try-- DECOMP GREENS --and find that our program has been loaded. We can get rid of our green screen with-- 0 GRAPHICS --and then get it back with-- GREENS.

We can also move text back and forth to the disk. For example, we can send-- THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG --by moving it into PAD and then moving it to disk in the middle of screen 4 with-- PAD 4 BLOCK 320 + 64 CMOVE. We cannot bring it back with LOAD because it is not a program. But we can clear PAD and then bring the text back by using CMOVE again this way-- 4 BLOCK 320 + PAD 64 CMOVE. The text is now back in PAD once more. And there you have it, screen to disk and back from disk to screen.

Every Forth nut has a copy of the de facto bible--Leo Brodie's "Starting Forth". On page 262 he has a program to write an official memo peppered with randomly selected buzzwords that looks good until you try to make sense of the nonsense. You might like to experiment with it.

Here is a small program that allows you to talk back and forth to the PAD. It asks for your name and then echoes it back.

```
: PUTS PAD 68 BLANKS
: CR PAD 68 EXPECT ;
: GETS PAD 68 -TRAILING TYPE
  3 0 DO 126 EMIT LOOP ;
: MSG1 CR ." Hello, "
  ." what's your name?" CR ;
: MSG2 CR ." Hello " ;
: GREET MSG1 PUTS MSG2 GETS ;
```

The do..loop uses three backspaces to get rid of the three hearts that EXPECT adds to the text.

That's it for now. Leo Scanlon on page 202 of his "Forth Programming" has a routine to create and update a list of phone numbers. When I get it working you will be the first to know!

□□□□□□□□□□

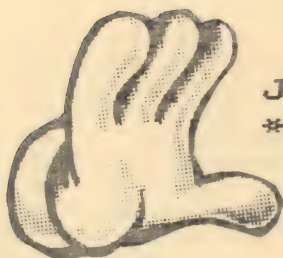
Have You Renewed...

YOUR MEMBERSHIP IN JACG?

There's pride in belonging  
to the best!!!

□□□□□□□□□□

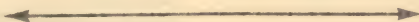
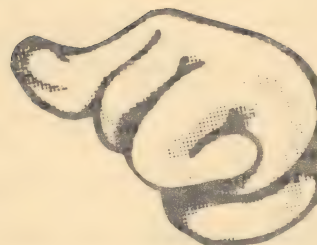




## JACG DISK LIBRARY

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### How To Order



**PROGRAM LIBRARY.** The legendary JACG library contains programs to entertain, confound, amuse, delight, and assist you. These have been selected from member contributions and by exchange and contribution from other Atari clubs throughout the world. No program is warranted or guaranteed in any way by JACG or any other party, and JACG accepts no responsibility other than to replace at no charge any disk or tape found to be physically defective.

The library is public domain material. It is JACG library policy to not knowingly include in the library any commercial or copyrighted software, except by permission of the owner.

The library is organized into volumes for duplication purposes. While the software itself is considered free to members, and members are free to exchange or duplicate the software, we do charge for disks and tapes. These charges cover costs of media, wear and tear on the library tape and disk drives, and postage.

**OBTAINING VOLUMES.** The disk library is available at all JACG monthly meetings. Disks may be obtained in the lobby before each meeting. There is a charge of \$5.00 per volume (one disk of programs). We provide the disks.

**TAPE VOLUMES.** Some but not all of the library programs can be transferred to and will work on cassette based Atari systems. We have two tape librarians who attempt to provide volumes on that media. These volumes (one tape of programs) mirror the disk volumes, except omitting any programs that require a disk to operate. The charge is \$5.00 per tape volume. Owing to the difficulty of maintaining a full inventory on tape, you may have to take potluck, or ask for a specific volume to be custom duplicated for you, to be picked up at the next meeting.

**BUT I LIVE IN ALASKA!** Yes, we know. You can order disk volumes by mail. These are \$6.00 per volume. Send a check for the proper amount (not cash) made out to JERSEY ATARI COMPUTER GROUP and specify the volumes desired. Send to:

J.A.C.G.  
attn D.A. URSEM  
37 Clover Lane  
Randolph N.J. 07869

Do NOT send S.A.S.E or blank disks when with mail orders. The \$6.00 fee takes care of all that.

We DO NOT accept mail order requests for tapes at present. (The solution is to order the disk volume and then visit a friend who has a disk and copy over the programs to tape).

**CONTRIBUTIONS** to the library are very welcome. Don't be shy - if YOU think what you invented is neat, other members probably will too! Send in your creation on a disk. We'll return the disk with a couple of free programs and maybe some helpful advice on how to make it even more fantastic.

**DOCUMENTATION AND ADVICE** is the other service your library provides. If you are stuck on a programming or operational problem, or need info about current hardware or software, feel free to give me a call evenings or weekends at (201) 895-2522. We have experience with or information on every programming technique, program, or peripheral that works on the Atari. JACG can't circulate documentation but we can answer questions or get you to someone who can.



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# J A C G Disk Library Listing

| DISK FILENAME |        |                                                                                                                                                                                                                                |          | DISK volume 001 | GAMES 001 |
|---------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|-----------|
| CLASSIF       | LANG   | WHAT IT DOES                                                                                                                                                                                                                   | REQUIRES | HOW TO LOAD     |           |
| 001 SLOT      | simul  | BASIC graphic working slot machine                                                                                                                                                                                             | 16k BAS  | basic load      |           |
| SLOTS         | simul  | BASIC fancier slot machine                                                                                                                                                                                                     | 16k BAS  | basic load      |           |
| ✓ STARTREK    | simul  | shows payoff/hit ratio for various combinations. Accepts 1-5 "coins" and keeps track of running bankroll total. Good example to study for use of basic plotting commands and user input.<br>BASIC classic computer battle game | 16k BAS  | basic load      |           |
| STAR          | --     | well done game of captaining the starship ENTERPRISE in pursuit of enemy KLINGON warships. Seven commands include phasers, shields, navigation, sensors                                                                        |          |                 |           |
| BARRICADE     | arcade | data file used by STARTREK program                                                                                                                                                                                             | 16k BAS  | basic load      |           |
| MATE2         | arcade | BASIC 2-PLAYER GAME                                                                                                                                                                                                            | 16k BAS  | basic load      |           |
| BOING         | arcade | each player tries to block opponent from moving. first player to hit barricade loses. onscreen scoring.                                                                                                                        | 16k BAS  | basic load      |           |
| CIVILWAR      | simul  | like BARRICADE, but different sound effects                                                                                                                                                                                    | 16k BAS  | basic load      |           |
| NITENARE      | demo   | keep tramping under bouncing Barney. Good action and graphics. 10 skill levels.                                                                                                                                                | 16k BAS  | basic load      |           |
| ALIEN         | arcade | BASIC 1-PLAYER economic simulation                                                                                                                                                                                             | 16k BAS  | basic load      |           |
| BLACKJACK     | simul  | win battles, decide on relative funding to spend on food, paymaster, ammunition, then choose tactics to suit. Will your army be loyal or desert in heat of battle? Similar to KINGDOM from APA                                 | 16k BAS  | basic load      |           |
| LANDER        | simul  | BASIC a software practical joke                                                                                                                                                                                                | 16k BAS  | basic load      |           |
|               |        | run this and at first nothing seems to have happened. But your Atari now has a personality of its own. It may not do what you command, if it doesn't feel like it. Shades of HAL from the movie 2001.                          |          |                 |           |
|               |        | BASIC 1 or 2 PLAYER shoot at alien rockets                                                                                                                                                                                     | 16k BAS  | basic load      |           |
|               |        | the card game, with good graphic cards                                                                                                                                                                                         | 16k BAS  | basic load      |           |
|               |        | enter 0 or 1 or 2 for number of cards to be hit with)                                                                                                                                                                          |          |                 |           |
|               |        | BASIC simple game of landing lunar module                                                                                                                                                                                      | 16k BAS  | basic load      |           |

| DISK FILENAME |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |          | DISK volume 002          | GAMES 002 |
|---------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------------|-----------|
| CLASSIF       | LANG    | WHAT IT DOES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | REQUIRES | HOW TO LOAD              |           |
| 002 VEGAS     | simul   | BASIC 4-player slot machine graphic game                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 16k BAS  | basic load               |           |
| HORSERAC      | simul   | BASIC graphic horse race with betting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 16k BAS  | basic load               |           |
| MISSILE       | arcade  | multi player race. pick your horse and place your bets. then watch the action as all horses trot across the screen                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 16k BAS  | dos load then basic load |           |
| CUR.OBJ       | --      | type DOS to enter disk menu, then select menu item 'L' and load file CUR.OBJ, then select item 'B' to enter basic and type RUN"D:MISSILE"                                                                                                                                                                                                                                                                                                                                                                                                                                               |          |                          |           |
| SMASH         | graphic | ML machine language (object) file for above                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16k BAS  | basic load               |           |
| TTT           | graphic | BASIC car racing game with keyboard control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 16k BAS  | basic load               |           |
| CLEWSD        | simul   | you control and maneuver graphic racing car through its course by keying numbered commands                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 16k BAS  | basic load               |           |
| DOGDATE       | simul   | BASIC tic-tac-toe, play against the computer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 16k BAS  | basic load               |           |
| STARWARP      | simul   | BASIC computerized murder mystery                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 16k BAS  | basic load               |           |
| DOGGIES       | graphic | in this game derived from the board game of CLUE, you play the famous inspector CLEWSD, ask questions of suspects to obtain clues. the computer takes the role of all suspects and also provides you with floor plans of the building where the crime occurred.                                                                                                                                                                                                                                                                                                                         | 16k BAS  | basic load               |           |
|               |         | deliver the mail in a dog-loving town                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 16k BAS  | basic load               |           |
|               |         | you are a letter carrier in the town of GNAWVILLE, which has a severe dog-bite problem. choose your actions to minimize your personal damage while still getting the mail through to 10 destinations. This is a text game.                                                                                                                                                                                                                                                                                                                                                              | 16k BAS  | basic load               |           |
|               |         | BASIC an elaborate STARTREK like game                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 16k BAS  | basic load               |           |
|               |         | pilot the starship Enterprise in search of the Klingon empire. And the crew is all there too! 20 commands receive acknowledgment and advice from the shipboard characters - SPOCK, BONES, SULO, SCOTTY, etc.                                                                                                                                                                                                                                                                                                                                                                            |          |                          |           |
|               |         | BASIC a mathematic puzzle gone graphic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 16k BAS  | basic load               |           |
|               |         | this well done graphic game is enjoyed by even three year olds for the colorful barking, tail-wagging dogs. But for the older set, this is a puzzle based on the famous TOWER of HANOI. the trick is to move all the blue dogs to where the yellow dogs are, and vice-versa, by moving only one at a time. Move a dog by using a joystick to move the sliding bone beneath him, then press the button, the doggie can move to an adjacent empty spot, or jump over one other dog to an empty spot. But he can't jump over two adjacent dogs. The puzzle can be solved in fifteen moves. |          |                          |           |

| DISK FILENAME |         |                                                                                                                                                                                                                                                                |          | DISK volume 003            | GAMES 003 |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------|-----------|
| CLASSIF       | LANG    | WHAT IT DOES                                                                                                                                                                                                                                                   | REQUIRES | HOW TO LOAD                |           |
| 003 ELECTRIC  | simul   | BASIC the life of an electric power company                                                                                                                                                                                                                    | 16k BAS  | basic load                 |           |
| TREASURE      | graphic | think it's easy to run a power company and turn a profit for the stockholders while keeping the consumers satisfied? Well, just try it! Here is a pretty complete simulation of all the things that a busy executive would have to cope with. Can you hack it? | 16k BAS  | basic load                 |           |
| LANDER        | simul   | a cute adventure type graphic game                                                                                                                                                                                                                             | 16k BAS  | basic load                 |           |
| ALIEN         | arcade  | on a graphic map of an island, you attempt to locate treasure and avoid unseen perils using keyboard directional commands.                                                                                                                                     | 16k BAS  | basic load                 |           |
| BOWLING       | graphic | BASIC very well done Lunar Lander game                                                                                                                                                                                                                         | 16k BAS  | basic load                 |           |
| RUNAWAY       | graphic | the simulation graphics even include, if you can land safely, an animated moonwalk and planting of old glory.                                                                                                                                                  | 16k BAS  | basic load                 |           |
| SEARCH        | graphic | BASIC a basic language MISSILE COMMAND game                                                                                                                                                                                                                    | 16k BAS  | basic load                 |           |
| GALLERY       | arcade  | BASIC joystick moves bowler; button throws.                                                                                                                                                                                                                    | 16k BAS  | basic load                 |           |
| MUNCHERS      | arcade  | BASIC aircraft landing simulator                                                                                                                                                                                                                               | 16k BAS  | basic load (needs paddles) |           |
|               |         | numeric keys and paddles control the aircraft on its approach. If you have a basic compiler, try compiling this program for faster action.                                                                                                                     |          |                            |           |
|               |         | BASIC a treasure search game using key cmds                                                                                                                                                                                                                    | 16k BAS  | basic load                 |           |
|               |         | shooting gallery with moving targets                                                                                                                                                                                                                           | 16k BAS  | basic load                 |           |
|               |         | a chase game using p/m graphics                                                                                                                                                                                                                                | 16k BAS  | basic load                 |           |

| DISK FILENAME |          |                                                                                                                                                                                                                                                                                                                         |          | DISK volume 004 | GAMES 004 |
|---------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|-----------|
| CLASSIF       | LANG     | WHAT IT DOES                                                                                                                                                                                                                                                                                                            | REQUIRES | HOW TO LOAD     |           |
| 004 ADVEN     | adventur | BASIC the classic dungeon explorer game                                                                                                                                                                                                                                                                                 | 16k BAS  | autoruns        |           |
|               |          | As provided, this is a very nice text adventure game in a complex of dimly lit caves and dank passages, using the conventional two-word command vocabulary such as GO NORTH, OPEN DOOR, HIT MONSTER, etc. The game provides its own, spooky gothic character font. Try to get through this adventure alive, I CARE YOU! |          |                 |           |



What is incredible about this program is that besides the original adventure, you can add your own features, or even design your own complete scenario and then play it. And you don't have to know any BASIC programming at all -- just a simple few prompted commands.

J A C B ran a contest in 1983 to see who could be the most creative in using this very program to build their own adventure. Another volume in our library includes the contest winner - a dungeon? No! A faithful re-creation of Victorian London with Sherlock Holmes racing through fog-shrouded gaslit streets on a mission of rescue. Does that give you an idea of what you can do with this program?

To explore the creative side, load the program but don't run it. type 100 and return to delete the line that ordinarily enters the game mode. When you RUN, you'll get a prompt: is data disk in? insert a blank but previously formatted disk, type y and return. You'll get a prompt: ? on the next line. type in backslash and the word new, i.e. \NEW and the program will know you are starting a brand new scenario.

The backslash (notice it is \ not /) is the secret prefix that makes the program recognize words as editing commands instead of acting on them. This works even while you're playing a game, so that you can look at its innards to correct or improve or add to the scenario as you are playing it to test it out.

Some of the backslash editing commands are explained in a help file that is included on this volume. Just type RUN"D:HELP" to read them. This tells you enough to create and link together your own scenario 'rooms'.

If you are serious about wanting to build your own adventure, J A C B has available from the library copies of the full instructions that were provided for the 1983 contest. This is a complete package that tells everything there is to know about all legal commands, explains the proper step-by-step sequence for using them, and goes beyond to explain how to modify sound effects and other aspects. a full commented listing of the complete program is included in case you wish to refer to it. Ask for the ADVENTURE PROGRAM DOCUMENTATION PACKAGE.

| DISK FILENAME |  |  | CLASSIF                                                                                                            | LANG  | WHAT IT DOES                                                                                                                                              | DISK volume 005 | EDUCATIONAL 001             |
|---------------|--|--|--------------------------------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------|
| 005 ELLIPSE   |  |  | math                                                                                                               | BASIC | draws ellipse for chosen x,y coords                                                                                                                       | 16K BAS         | basic load                  |
|               |  |  | x value must be < 6.95 and y < 3.95. the program will fit an ellipse to the given parameters and draw it on screen |       |                                                                                                                                                           |                 |                             |
| ETCHSKCH      |  |  | art                                                                                                                | BASIC | joystick driven drawing in BR, 8 mode                                                                                                                     | 16K BAS         | basic load                  |
| MAGIC         |  |  | words                                                                                                              | BASIC | a letter-substitution guessing game                                                                                                                       | 16K BAS         | basic load                  |
| BATCH         |  |  | computer                                                                                                           | BASIC | guessing game of computer phrases                                                                                                                         | 16K BAS         | basic load                  |
| OCTADRAW      |  |  | art                                                                                                                | BASIC | drawing in 8 directions at once                                                                                                                           | 16K BAS         | basic load                  |
| SIMON         |  |  | music                                                                                                              | BASIC | this program allows joystick controlled drawing producing unusual duplicate progressive chord patterns                                                    | 16K BAS         | interesting pattern effects |
| SPY           |  |  | math                                                                                                               | BASIC | figure location of 4 spies on xy grid                                                                                                                     | 16K BAS         | basic load                  |
| TOWERS        |  |  | math                                                                                                               | BASIC | towers of hanoi mathematic puzzle                                                                                                                         | 16K BAS         | basic load                  |
| MATCHES       |  |  | math                                                                                                               | BASIC | like NIM puzzle. take away matches                                                                                                                        | 16K BAS         | basic load                  |
| APTITUDE      |  |  | challenge words                                                                                                    | BASIC | to see who is forced to pick up last matchstick. player can only take 1,2, or 3 per move.                                                                 | 16K BAS         | basic load                  |
| PRICE         |  |  | math                                                                                                               | BASIC | this is a cute aptitude 'test'. pick out hidden words/phrases based on graphic and word clues.                                                            | 16K BAS         | basic load                  |
| LIGHT         |  |  | science                                                                                                            | BASIC | this quiz is based on atari equipment as the objects. it is easy to modify to any objects you'd like to use.                                              | 16K BAS         | basic load                  |
| MATH2         |  |  | math                                                                                                               | BASIC | shows laws of physics: refraction, reflection, etc via graphic illustration of each situation                                                             | 16K BAS         | basic load                  |
| MATHDRIL      |  |  | math                                                                                                               | BASIC | the concepts included here are geared for high school level                                                                                               | 16K BAS         | basic load                  |
| MATHPKG       |  |  | math                                                                                                               | BASIC | good drill for gradeschool +/-                                                                                                                            | 16K BAS         | basic load                  |
| STATES        |  |  | geogrp                                                                                                             | BASIC | includes lowest common denominator, prime factor of integer, linear interpolation, quadratic roots, simultaneous equations, permutations and combinations | 16K BAS         | basic load                  |
| AMERICAS      |  |  | geogrp                                                                                                             | BASIC | states and capitals quiz/drill                                                                                                                            | 16K BAS         | basic load                  |
|               |  |  | includes states/countries of North, Central, and South Americas and their capital cities.                          |       |                                                                                                                                                           |                 |                             |

#### DISK volume 006 EDUCATIONAL 002

| DISK FILENAME |  |  | CLASSIF                                                                                                                                                                                                                                                                                                                                                        | LANG  | WHAT IT DOES                                                                                                     | REQUIRES | HOW TO LOAD |
|---------------|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------------------------------------|----------|-------------|
| 006 METRICS   |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | metric-U.S. conversion of measures                                                                               | 16K BAS  | basic load  |
|               |  |  | converts metric system quantities to english system equivalents and vice versa. handles length, weights, volume, temperature measures.                                                                                                                                                                                                                         |       |                                                                                                                  |          |             |
| ASTRONOM      |  |  | science                                                                                                                                                                                                                                                                                                                                                        | BASIC | figures out astronomical date & time                                                                             | 16K BAS  | basic load  |
| SPELLING      |  |  | english                                                                                                                                                                                                                                                                                                                                                        | BASIC | computes greenwich time, julian date, local sidereal time                                                        | 16K BAS  | basic load  |
|               |  |  | english spelling bee - using your word list                                                                                                                                                                                                                                                                                                                    |       |                                                                                                                  |          |             |
| SIMON2        |  |  | music                                                                                                                                                                                                                                                                                                                                                          | BASIC | custom tailor this game to use whatever vocabulary words you prefer. Nice graphic and sound effects accompany it | 16K BAS  | basic load  |
| PRICE         |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | match tune sequence using joy stick                                                                              | 16K BAS  | basic load  |
|               |  |  | price is right game using math items                                                                                                                                                                                                                                                                                                                           |       |                                                                                                                  |          |             |
| NUMBERLI      |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | illustrates decimals and ranges, higher and lower numbers                                                        | 16K BAS  | basic load  |
| MULT          |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | recognition of values in number lists                                                                            | 16K BAS  | basic load  |
| CIPHER        |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | multiplication drill. good graphics                                                                              | 16K BAS  | basic load  |
| MAGBLK        |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | routes for encoding/decoding text                                                                                | 16K BAS  | basic load  |
| PREMATH       |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | arithmetic drills                                                                                                | 16K BAS  | basic load  |
|               |  |  | teach preschoolers to count                                                                                                                                                                                                                                                                                                                                    |       |                                                                                                                  |          |             |
| GEOQUIZ       |  |  | geogrp                                                                                                                                                                                                                                                                                                                                                         | BASIC | good graphics. also includes subtraction concepts                                                                | 16K BAS  | basic load  |
|               |  |  | computer tries to guess your country                                                                                                                                                                                                                                                                                                                           |       |                                                                                                                  |          |             |
|               |  |  | a neat twist on learning. You think of a country or city. the computer will ask you a series of questions about it. if you know enough about the characteristics of your choice - its environment, hemisphere, climate, neighboring countries, etc, and make no mistakes in your answers, the computer should be able to zero in and guess your secret answer. |       |                                                                                                                  |          |             |
| MATHED        |  |  | math                                                                                                                                                                                                                                                                                                                                                           | BASIC | drills on arithmetic: + - / *                                                                                    | 16K BAS  | basic load  |
|               |  |  | can be tailored to grade level -- easy to difficult problems.                                                                                                                                                                                                                                                                                                  |       |                                                                                                                  |          |             |

#### DISK volume 007 UTILITIES 001

| DISK FILENAME |  |  | CLASSIF                                                                                                                                                                                                     | LANG  | WHAT IT DOES                          | REQUIRES | HOW TO LOAD |
|---------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------------------------|----------|-------------|
| 007 MENU.SYS  |  |  | HUMAN                                                                                                                                                                                                       | BASIC | automatic menu select and run program | 16K BAS  | autoruns    |
|               |  |  | make it easy for your family and others to start up the computer and get a program running. place this program on a disk with other programs of your own. when the disk and computer are powered up, a menu |       |                                       |          |             |



|                                                                                                                                                                                                                                                                                                                                                                                                                |          |       |                                               |                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|-----------------------------------------------|---------------------------|
| will automatically appear listing all available programs on the disk, just by typing in its number any program will be loaded and run. of course this only works with basic programs and requires the basic cartridge be inserted when the machine is turned on, the companion file AUTORUN.SYS also included on this volume must also be present on the disk where MENU.SYS resides. A real convenience item. |          |       |                                               |                           |
| HELP                                                                                                                                                                                                                                                                                                                                                                                                           | HUMAN    | BASIC | reads and displays pages of help info         | 16K BAS basic load        |
| HELPWRT                                                                                                                                                                                                                                                                                                                                                                                                        | HUMAN    | BASIC | creates help files for use by HELP            | 16K BAS basic load        |
| DAYWEEK                                                                                                                                                                                                                                                                                                                                                                                                        | PGMNG    | BASIC | given date, figures out day of week           | 16K BAS basic load        |
| DECDUMP                                                                                                                                                                                                                                                                                                                                                                                                        | DEBUG    | BASIC | show memory contents on screen                | 16K BAS basic load        |
| DISASM                                                                                                                                                                                                                                                                                                                                                                                                         | DEBUG    | BASIC | disassemble machine code to assembly language | 16K BAS basic load        |
| DISKTAPE                                                                                                                                                                                                                                                                                                                                                                                                       | DISK     | BASIC | makes a backup of whole disk to tape          | 16K BAS basic load        |
| HEXADEC                                                                                                                                                                                                                                                                                                                                                                                                        | DEBUG    | BASIC | converts hexadecimal to decimal               | 16K BAS basic load        |
| MODEM                                                                                                                                                                                                                                                                                                                                                                                                          | MODEM    | BASIC | for use in telephone communications           | 16K BAS basic load        |
| SUPERCMP                                                                                                                                                                                                                                                                                                                                                                                                       | HUMAN    | BASIC | compares two files for difference             | 16K BAS basic load        |
| LABELDSK                                                                                                                                                                                                                                                                                                                                                                                                       | HUMAN    | BASIC | prints paper label disk directory             | 16K BAS basic load        |
| SCREENPR                                                                                                                                                                                                                                                                                                                                                                                                       | HUMAN    | BASIC | print screen results                          | 16K BAS basic load        |
| EXAMINE.UTL                                                                                                                                                                                                                                                                                                                                                                                                    | DISK     | BASIC | display contents of disk sectors              | 16K BAS basic load        |
| TVTEST                                                                                                                                                                                                                                                                                                                                                                                                         | HARDWARE | BASIC | colorbars/crosshatch for adjusting tv         | 16K BAS basic load        |
| AUTORUN.BLD                                                                                                                                                                                                                                                                                                                                                                                                    | HUMAN    | BASIC | makes any basic program self-starting         | 16K BAS basic load        |
| VARIABLE.LST                                                                                                                                                                                                                                                                                                                                                                                                   | DEBUG    | BASIC | list all variables used by a program          | 16K BAS ENTER"D:VAR*.LST" |
| UPNLOAD                                                                                                                                                                                                                                                                                                                                                                                                        | MODEM    | BASIC | for telephone communications                  | 16K BAS basic load        |
| MEMDUMP                                                                                                                                                                                                                                                                                                                                                                                                        | DEBUG    | BASIC | prints memory contents in HEX & ASCII         | 16K BAS basic load        |
| HEXLOAD                                                                                                                                                                                                                                                                                                                                                                                                        | PGMNG    | BASIC | converts hex code to BASIC DATA statements    | 16K BAS basic load        |
| DISKDUMP                                                                                                                                                                                                                                                                                                                                                                                                       | DEBUG    | BASIC | disassemble all files from disk               | 16K BAS basic load        |
| OBJCONV                                                                                                                                                                                                                                                                                                                                                                                                        | PGMNG    | BASIC | converts binary file to basic string          | 16K BAS basic load        |
| INTERFACE.IN8                                                                                                                                                                                                                                                                                                                                                                                                  | MODEM    | ML    | fixes a bug in 850 interface                  | 16K dos load              |
| MENU                                                                                                                                                                                                                                                                                                                                                                                                           | HUMAN    | BASIC | a different looking autorun menu              | 16K BAS basic load        |
| DUPL                                                                                                                                                                                                                                                                                                                                                                                                           | DISK     | BASIC | duplicate all non-DOS files                   | 16K BAS basic load        |
| COPY                                                                                                                                                                                                                                                                                                                                                                                                           | DISK     | BASIC | copy specified file from disk to disk         | 16K BAS basic load        |
| PRINT                                                                                                                                                                                                                                                                                                                                                                                                          | PRINT    | BASIC | prints a file without leaving basic           | 16K BAS basic load        |
| MOD2                                                                                                                                                                                                                                                                                                                                                                                                           | MODEM    | BASIC | yet another modem program version             | 16K BAS basic load        |

| DISK FILENAME | CLASSIF | LANG  | WHAT IT DOES                          | REQUIRES       | HOW TO LOAD |
|---------------|---------|-------|---------------------------------------|----------------|-------------|
| 008 SHOOT.OBJ | arcade  | ML    | shooting game like 2600VCS            | COMBAT cart16k | dosload     |
| 008 STARMER   | simul   | BASIC | Star Merchant - amass wealth in space | 16K BAS        | basload     |

as proprietor of interstellar trading vessel, try to get rich shuttling strange cargoes among planetary markets. in this text game you have to also watch out for little things like asteroid collisions and



|                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |         |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|
| ✓ 008 LUNAR    | space pirates<br>simul BASIC attempt to soft-land lunar module                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 16K BAS | basload |
| 008 PLUSZERO   | this version is interesting in use of P/M graphics for ship and rocket exhaust trail<br>arcade BASIC very fast action arcade game                                                                                                                                                                                                                                                                                                                                                                                                        | 16K BAS | basload |
| 008 TIMETRIL   | this game avoids violent shooting. the object is to merely touch the moving targets. instructions are included.<br>arcade BASIC auto rally with graphics.                                                                                                                                                                                                                                                                                                                                                                                | 16K BAS | basload |
| ✓ 008 GOMOKU   | graphic BASIC intriguing graphic oriental checkers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 16K BAS | basload |
| ✓ 008 FURTRADE | in this popular Japanese game, which is to the game of GO as checkers is to chess, you play against the ATARI<br>simul BASIC role-play a Canadian frontiersman                                                                                                                                                                                                                                                                                                                                                                           | 16K BAS | basload |
| 008 RUSSROUL   | this is a text game. you try to gather pelts and get them past indians and other hazards to the trading<br>demo BASIC russian roulette via computer                                                                                                                                                                                                                                                                                                                                                                                      | 16K BAS | basload |
| ✓ 008 ARTILL   | see if you can add in some graphics and sound to this skeletal program for truly impressive effects.<br>this is a good program to study and tinker with if you are just learning BASIC.<br>graphic BASIC 2-player game. a cannon fight                                                                                                                                                                                                                                                                                                   | 16K BAS | basload |
| ✓ 008 NUKE     | try to adjust your elevation and powder to compensate for changing wind direction and strength. fun for everyone<br>simul BASIC a nuclear reactor plant in meltdown                                                                                                                                                                                                                                                                                                                                                                      | 16K BAS | basload |
| ✓ 008 YATZEE   | this is similar to ATARI's SCRAM program. it displays a good graphic drawing of a reactor plant. then the action starts. you enter numbers from 1-100 to adjust control rod settings, primary and secondary coolant flow systems. program gives continuous readout of reactor temperature, power output, etc. the object is to keep things running with appropriate actions as a series of little emergencies threaten to escalate. if you fumble, you may be the cause of a meltdown.<br>graphic BASIC computerized version of the game | 16K BAS | basload |

several players can play the usual game with the computer taking care of all the dice and pencil work. good graphics and sound features.



| DISK FILENAME | CLASSIF                                                                                                                                                                                                                                                                                                                                                                                                                    | LANG  | WHAT IT DOES                         | DISK volume 009 | GAMES 006 | REQUIRES | HOW TO LOAD |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------|-----------------|-----------|----------|-------------|
| 009 GOLF      | graphic                                                                                                                                                                                                                                                                                                                                                                                                                    | BASIC | game of golf with graphics and sound |                 |           | 16K BAS  | basload     |
| 009 STDPOKER  | graphic                                                                                                                                                                                                                                                                                                                                                                                                                    | BASIC | 5 card stud poker against the ATARI  |                 |           | 16K BAS  | basload     |
| ✓ 009 KINGDOM | simul                                                                                                                                                                                                                                                                                                                                                                                                                      | BASIC | role-play the ruler of a kingdom     |                 |           | 16K BAS  | basload     |
| 009 STARBASE  | in this text game you lead the kingdom of Elfia. can you rule fairly for 8 years (turns) allocating the realm's resources to keep the people fed and happy? Or will you fumble the economics and get overthrown by an angry populace? this is a good implementation of the classic computer economic simulation; it is also an interesting study aid for that subject.<br>arcade BASIC joystick game. defend base in space |       |                                      |                 |           | 16K BAS  | basload     |
| 009 PINBALL   | you can shoot laser beams in 4 directions against masses of oncoming ships that come at your central base from random directions. play gets faster as it proceeds<br>graphic BASIC graphic, sound, joystick used in play                                                                                                                                                                                                   |       |                                      |                 |           | 16K BAS  | basload     |
| 009 MONOPOLY  | graphics are used well in displaying the elements of this computerized version of the classic board game.<br>graphic BASIC multiple-player version of board game                                                                                                                                                                                                                                                           |       |                                      |                 |           | 16K BAS  | basload     |
| 009 LUNARLND  | simul BASIC paddle-driven version of moon lander                                                                                                                                                                                                                                                                                                                                                                           |       |                                      |                 |           | 16K BAS  | basload     |
| 009 BOMB      | graphic BASIC stop oncoming missiles with laser                                                                                                                                                                                                                                                                                                                                                                            |       |                                      |                 |           | 16K BAS  | basload     |
| 009 BALISTIC  | joysticks control angle and powder loads of cannons arcing shots over a central mountain. clobber the opponent before your cannon gets a shot lobbed on top of it. this version is well done with graphics and sound.<br>graphic BASIC 2-player game. cannon battle                                                                                                                                                        |       |                                      |                 |           | 16K BAS  | basload     |

| DISK FILENAME  | CLASSIF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | LANG  | WHAT IT DOES                     | DISK volume 010 | GAMES 007 | REQUIRES | HOW TO LOAD |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------------------------|-----------------|-----------|----------|-------------|
| ✓ 010 FAILSAFE | simul                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | BASIC | nuclear reactor plant simulation |                 |           | 16K BAS  | basload     |
| 010 FOOTBALL   | similar to ATARI SCRAM program. you manipulate the control panel of a nuclear power reactor. try to achieve maximum power output without accidentally causing the plant to go out of control into a meltdown<br>graphic BASIC your team pitted against computer's                                                                                                                                                                                                                                                                                                                                                                               |       |                                  |                 |           | 16K BAS  | basload     |
| ✓ 010 CHICKEN  | you have a choice of 20 separate plays for offense or defense. program then graphically moves the players and describes the action by text printout on th screen.<br>arcade BASIC a chicken crossing a busy highway                                                                                                                                                                                                                                                                                                                                                                                                                             |       |                                  |                 |           | 16K BAS  | basload     |
| 010 ROBOTWAR   | favorite program for adults and one that three and four year old kids love to play because of the color, action, and sound. fast action via p/m graphics. you score by moving the squawking chicken across six lanes of traffic without getting hit. then the program advances a level and traffic becomes heavier. get hit, and the traffic eases up a little to give you a fighting chance. after seven crossings, you get bonus time. the feature of self-adjusting the difficulty to match the player's skill is the most appealing feature of this program (created by Stan Ockers).<br>graphic BASIC maneuver your man to avoid attackers |       |                                  |                 |           | 16K BAS  | basload     |
| 010 ENEMY      | you play against the computer's onslaught of attacking robots. simple graphics.<br>graphic BASIC try to hold off barrage of attackers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |                                  |                 |           | 16K BAS  | basload     |
| 010 MISSILE1   | enemy 'soldiers' advance from left to right. your well placed shots will temporarily halt one column, but the others keep coming. how long can you keep them all from reaching you?<br>graphic BASIC simplified version of missile command                                                                                                                                                                                                                                                                                                                                                                                                      |       |                                  |                 |           | 16K BAS  | basload     |
| 010 FIVESTUD   | very good graphics show hands of cards as the computer deals and you play against it<br>graphic BASIC you play five card stud poker vs cptr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |                                  |                 |           | 16K BAS  | basload     |

| DISK FILENAME  | CLASSIF                                                                                                                                                                                                                                                                    | LANG  | WHAT IT DOES                         | DISK volume 011 | GAMES 008 | REQUIRES | HOW TO LOAD |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------|-----------------|-----------|----------|-------------|
| ✓ 011 LUNARLND | simul                                                                                                                                                                                                                                                                      | BASIC | land lunar module on moon (joystick) |                 |           | 16K BAS  | basload     |
| 011 SUBCMD     | graphic                                                                                                                                                                                                                                                                    | BASIC | shoot rising mines to hit ships      |                 |           | 16K BAS  | basload     |
| ✓ 011 HAMURABI | simple graphics game. you control sub and must time your torpedoes to hit mines rising off sea floor so they explode beneath moving surface ships.<br>simul BASIC govern the ancient kingdom of Sumeria                                                                    |       |                                      |                 |           | 16K BAS  | basload     |
| 011 CANNON     | try to keep the people happy and the kingdom prosperous by judiciously buying seed, planting land, and storing or distributing grain. if you miscalculate, the laws of economics will drive you to ecological ruin.<br>graphic BASIC cannon duel 2-player game w/joysticks |       |                                      |                 |           | 16K BAS  | basload     |
| 011 GOLF       | players control opposing artillery units. adjust angle and velocity to make your graphic shots hit the opponent.<br>graphic BASIC masters golf 1 or 2 players                                                                                                              |       |                                      |                 |           | 16K BAS  | basload     |



|                                                                                                                                                                                                                                                                       |          |         |       |                                       |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|-------|---------------------------------------|-----------------|
| good graphics. for each shot you get to select type of club and direction of swing (direction: 10=N 20=E 30=S 40=W)                                                                                                                                                   |          |         |       |                                       |                 |
| 011                                                                                                                                                                                                                                                                   | BLASTER  | graphic | BASIC | blast invading aliens                 | 16K BAS basload |
| simple shoot the aliens game. good for tinkering with if you are learning basic programming techniques.                                                                                                                                                               |          |         |       |                                       |                 |
| 011                                                                                                                                                                                                                                                                   | RICOCHE  | math    | BASIC | a game of logic and deduction         | 16K BAS basload |
| 011                                                                                                                                                                                                                                                                   | PROBOWL  | graphic | BASIC | a nice graphic bowling game           | 16K BAS basload |
| 011                                                                                                                                                                                                                                                                   | SAUCER   | graphic | BASIC | simple shoot game                     | 16K BAS basload |
| 011                                                                                                                                                                                                                                                                   | NUMBATTL | graphic | BASIC | interesting number battle vs computer | 16K BAS basload |
| 011                                                                                                                                                                                                                                                                   | HAZERIDR | arcade  | BASIC | find your way out of 3d maze          | 16K BAS basload |
| a motorcyclist is stuck in a maze. can you get the cyclist out? you get an over-the-handlebars view of the walls approaching in 3D line graphics. with surprisingly fast action. options include a limited number of looks at a map of where you've already traveled. |          |         |       |                                       |                 |
| 011                                                                                                                                                                                                                                                                   | JUMP     | graphic | BASIC | time parachute jump onto island       | 16K BAS basload |
| a tough little game using a joystick                                                                                                                                                                                                                                  |          |         |       |                                       |                 |
| 011                                                                                                                                                                                                                                                                   | NEWDORS  | graphic | BASIC | open secret doors and find...monsters | 16K BAS basload |

| DISK volume 012 EDUCATION 003                                                                                                                                                                                                                                                                       |         |       |                                       |          |             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|---------------------------------------|----------|-------------|
| DISK FILENAME                                                                                                                                                                                                                                                                                       | CLASSIF | LANG  | WHAT IT DOES                          | REQUIRES | HOW TO LOAD |
| 012 HANGQUOT                                                                                                                                                                                                                                                                                        | english | BASIC | hangman guessing of famous quotations | 16K BAS  | basload     |
| 012 WORLDCAP                                                                                                                                                                                                                                                                                        | geogrp  | BASIC | capital/country/province drills       | 16K BAS  | basload     |
| program provides either search or quiz functions for capitals or just countries. Western hemisphere only.                                                                                                                                                                                           |         |       |                                       |          |             |
| 012 HANGMAN2                                                                                                                                                                                                                                                                                        | english | BASIC | hangman with 7 selectable word lists  | 16K BAS  | basload     |
| non graphic version, but you can choose from these categories: animals, foods, states, countries, toys, miscellaneous, and easy words                                                                                                                                                               |         |       |                                       |          |             |
| 012 SPEDREAD                                                                                                                                                                                                                                                                                        | english | BASIC | exercises for speed reading.          | 16K BAS  | basload     |
| practice by choosing words, phrases, short sentences, or full sentences to be flashed on screen at selectable exposure intervals. from 50 to 2500 words per minute. phrases and sentences are randomly constructed on the fly. this is a drill for recognition but not comprehension.               |         |       |                                       |          |             |
| 012 GENLTEST                                                                                                                                                                                                                                                                                        | misc    | BASIC | quiz using clever matching technique  | 16K BAS  | basload     |
| set up as a general knowledge quiz. the matching technique is the notable value here. you can tailor the provided program to any desired subject. you may also want to improve it by adding capability to detect a series of wrong answers and provide the correct answer to avoid user frustration |         |       |                                       |          |             |
| 012 HOMEWORK                                                                                                                                                                                                                                                                                        | misc    | BASIC | drill program. enter your own content | 16K BAS  | basload     |
| another modifiable program. you can add your own questions on any subject. you may want to improve it by adding features from GENLTEST program.                                                                                                                                                     |         |       |                                       |          |             |
| 012 MATHREV                                                                                                                                                                                                                                                                                         | math    | BASIC | math review -- add, subtr, mult, div  | 16K BAS  | basload     |
| 012 CHMISTRY                                                                                                                                                                                                                                                                                        | science | BASIC | chemistry rules and topics drill      | 16K BAS  | basload     |
| drills are provided for: element names, element symbols, radical names, radical symbols, oxidation states and solubility rule numbers                                                                                                                                                               |         |       |                                       |          |             |
| 012 SCIENCE                                                                                                                                                                                                                                                                                         | science | BASIC | simple calculations of various types  | 16K BAS  | basload     |
| includes volumes, density, solubility, and fraction conversion. also a three number multiplication calculator                                                                                                                                                                                       |         |       |                                       |          |             |
| 012 HANGMAN                                                                                                                                                                                                                                                                                         | english | BASIC | very well done graphic version        | 16K BAS  | basload     |
| uses redefined character graphics and joystick control. best appearance on color tv.                                                                                                                                                                                                                |         |       |                                       |          |             |
| 012 HANGMAN.FNT                                                                                                                                                                                                                                                                                     | n/a     | data  | data for character set for HANGMAN    |          |             |
| 012 HANGUPS                                                                                                                                                                                                                                                                                         | n/a     | data  | data file used by HANGMAN             |          |             |

| DISK volume 013 GRAPHIC/SOUND 001                                                                                                                                                                                                                                                                                                                                                                                                            |          |       |                                       |          |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|---------------------------------------|----------|-------------|
| DISK FILENAME                                                                                                                                                                                                                                                                                                                                                                                                                                | CLASSIF  | LANG  | WHAT IT DOES                          | REQUIRES | HOW TO LOAD |
| 013 APPLEATR                                                                                                                                                                                                                                                                                                                                                                                                                                 | player/m | BASIC | DEMO - the Atari 'worm' eats an APPLE | 16K BAS  | basload     |
| HORSE                                                                                                                                                                                                                                                                                                                                                                                                                                        | charactr | BASIC | DEMO - galloping horse (redef chrset) | 16K BAS  | basload     |
| HORSE.DAT                                                                                                                                                                                                                                                                                                                                                                                                                                    | n/a      | data  | data file used by HORSE               |          |             |
| STAR                                                                                                                                                                                                                                                                                                                                                                                                                                         | playfld  | BASIC | DEMO - gr. 7 demo of random drawto    | 16K BAS  | basload     |
| DIATONIC                                                                                                                                                                                                                                                                                                                                                                                                                                     | sound    | BASIC | DEMO - random lines and tones         | 16K BAS  | basload     |
| STRNGART                                                                                                                                                                                                                                                                                                                                                                                                                                     | playfld  | BASIC | DEMO - kinetic string artwork         | 16K BAS  | basload     |
| GRAPH                                                                                                                                                                                                                                                                                                                                                                                                                                        | playfld  | BASIC | menu driven demo graphic 0,1-3,5,7,8  | 16K BAS  | basload     |
| CHU                                                                                                                                                                                                                                                                                                                                                                                                                                          | player/m | BASIC | fast movement p/m routine via m1      | 16K BAS  | basload     |
| machine language routine is stored in a string constant. easy to list to disk then re- ENTER as part of your own programs                                                                                                                                                                                                                                                                                                                    |          |       |                                       |          |             |
| SCENEMKR                                                                                                                                                                                                                                                                                                                                                                                                                                     | playfld  | BASIC | graphic drawing utility for backgrnds | 16K BAS  | basload     |
| create and save playfield background scenes. joystick moves cursor and fire button plots a point, if in PLOT mode, or draws a line from last plotted point. if in DRAW mode, or triggers an area fill, if in FILL mode. keyboard commands switch among modes. P=PLOT mode, D=DRAW, F=FILL, E=erase last plotted point, C=clear screen, 1,2,3,4=switch to that color register for plotting hue                                                |          |       |                                       |          |             |
| TRUCKS                                                                                                                                                                                                                                                                                                                                                                                                                                       | playfld  | BASIC | DEMO - joysticks 1-4 move trucks      | 16K BAS  | basload     |
| ADSRGEN.UTL                                                                                                                                                                                                                                                                                                                                                                                                                                  | sound    | BASIC | experiment with attack and decay      | 16K BAS  | basload     |
| vary attack(fade-in) and decay(fade-out) of sound. different keys produce different pitches. program routines can be added in to your own programs                                                                                                                                                                                                                                                                                           |          |       |                                       |          |             |
| SNDTST.UTL                                                                                                                                                                                                                                                                                                                                                                                                                                   | sound    | BASIC | control 4 voices via joystick         | 16K BAS  | basload     |
| you can immediately hear what effects different combinations of pitch and distortion create. select 10 different sounds by keys 0-9 and 10 control modes can be selected by SHIFT 0-9. Joystick left-right affects volume, up-down affects pitch, and fire button alters distortion.                                                                                                                                                         |          |       |                                       |          |             |
| SOUNDEFT.UTL                                                                                                                                                                                                                                                                                                                                                                                                                                 | sound    | BASIC | an editor for short sound effects     | 16K BAS  | basload     |
| build explosions, shots, booms, and beeps. it is not for long duration effects such as whistles. you control 4 voices. fire button switches between fast and slow adjustment. R key rotates among volume, distortion, and pitch to be affected by stick movement. the V key followed by 1 or 2 selects which voice to edit. you can generate a disk file with data for the finished sound effect. other options are detailed in the program. |          |       |                                       |          |             |
| VIDISND.DEM                                                                                                                                                                                                                                                                                                                                                                                                                                  | sound    | BASIC | DEMO - visually accompanied sound     | 16K BAS  | basload     |
| RNDSCALE.DEM                                                                                                                                                                                                                                                                                                                                                                                                                                 | sound    | BASIC | DEMO - musical scales in random order | 16K BAS  | basload     |
| LASER.SND                                                                                                                                                                                                                                                                                                                                                                                                                                    | sound    | BASIC | sound effect - ENTER into any program | 16K BAS  | basENTER    |
| handy basic sound effects routines. to add these into your own program, simply use the basic ENTER command to merge their numbered lines into the program you are writing or modifying. if you simply want to hear them, don't load a program, just ENTER from disk then RUN                                                                                                                                                                 |          |       |                                       |          |             |
| BOMB.SND                                                                                                                                                                                                                                                                                                                                                                                                                                     | sound    | BASIC | sound effect - ENTER into any program | 16K BAS  | basENTER    |
| GONG.SND                                                                                                                                                                                                                                                                                                                                                                                                                                     | sound    | BASIC | sound effect - ENTER into any program | 16K BAS  | basENTER    |

---Disk 13 Continued In Next Issue---



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# JERSEY ATARI COMPUTER GROUP #  
# 58 DEWEY AVENUE #  
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FIRST CLASS MAIL

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